

IF YOU COULD SEE WHAT I KNOW: MOVING PLANNERS' USE OF PHOTOGRAPHIC IMAGES FROM ILLUSTRATIONS TO EMPIRICAL DATA

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Planners have widely used photographs in their research; unfortunately, much of the use of visual images has been for illustrative purposes rather than for establishing empirical observations. The goal of this paper is to move planners' use of photographic images from illustrations ("Isn't this image interesting") to empirical data ("This image provides evidence that ..."). To achieve the goal of removing planners' ignorance of image-based research, this paper divides the realm of photographic research into three sections. The paper begins with an ontological discussion of the properties of visual images, followed by a detailed evaluation of the various threats to validity in photographic research. The second section looks at the necessary research design requirements that would allow planners to incorporate empirical images within a larger research project. The paper concludes with a discussion of visual-based field research of Manhattan's 14th Street vendors' market in New York City.

INTRODUCTION

Many planning investigators do not take full advantage of the empirical value of photographic images in their research projects. Planners need to “discriminate between photographs as part of the research analysis and photographs as illustrations” (Collier and Collier, 1990:170). Photographic images have empirical value if they are indexed to identifiable objects and spatial variables and are obtained through a methodical process (Collier and Collier, 1990:19; Prosser and Schwarz, 1998:118; Larsen, 1999:11). The veracity of photographs is determined by the purposeful activities of the photographer to capture images that provide explanatory information to an established theory and/or other data sets. Photographs used as illustrations simply provide visual confirmation of something that exists (or existed) with no relationship to other data sets or a predefined theory (Banks, 1998:11). Ignorance toward image-based research has been documented in a range of fields outside of planning, such as anthropology and sociology (Collier and Collier, 1990:10; Prosser, 1998). Prosser argues that the marginalization of “image-based research” among social science researchers is due to two situations: (1) it is “undervalued by the qualitative research community,” and (2) there is a lack of awareness that visual images “can make a proportionately greater contribution to research” (1998:97). If planners use photographs for illustrative purposes when they have the possibility to use them empirically, they miss the added insight provided by these visual slices of data.

Developments in ontological and epistemological debates regarding photographic research have reached a point where empirical strengths and weaknesses associated with visual images are fairly well agreed upon (Snyder and Allen, 1975:170). Issues that are now being discussed among image-based researchers question *how* will the various disciplines go about conducting and incorporating photographs into their research projects. The goal of this paper is to establish a research design protocol for planners that incorporates visual images.

This paper is divided into three sections. In the first section, we discuss the empirical nature of photographs. This discussion entails establishing the ontological nature of visual images. This is followed by a detailed evaluation of the qualitative and quantitative strengths of visual images and their weaknesses, especially as they relate to threats of internal and external validity. After establishing the empirical context of photographs, the second section looks at the necessary research design requirements that would allow planners to incorporate empirical visual images within a larger research project. The methodological discussion looks at the overall research project design; in particular, we discuss mixed-method research strategies as a model that can integrate visual data within the larger research project. Finally, in the third section, we discuss visual-based field research of Manhattan’s 14th Street vendors’ market in New York City.

AN EMPIRICAL ASSESSMENT OF VISUAL IMAGES

Photographs as “Specimens of Data”

This paper is organized around the assumption that photographs are “independent specimens of data” when placed in the context of “systematic recording during field work” (Collier and Collier, 1990:19, 163). What makes a simple photograph a specimen of data? Three ingredients are needed to make a visual image an empirical piece of data: (1) contemplation, (2) variable composition, and (3) indexicality of visual variables.

The contemplative ingredient of an empirical image is fulfilled when a photograph depicts a subject that exists and can be interpreted and analyzed by the researcher (Scruton, 1981:579). For Duff (1981:75):

Still photography has produced documents which can be contemplated; and unlike other more traditional arts that have, under the modernist influence, been reduced to contemplating themselves, photography has allowed us to study the experience of others, even if this has been selected and interpreted by the photographer and reduced by the process.

The second ingredient of what constitutes an empirical image is that the photograph must have an identifiable variable(s) that constitutes a subject of interest. “The most beautiful and technically superb photograph is useless in visual research if it does not conform to the needs of systematized observations” (i.e., methodology) (Collier and Collier, 1990:163; also see Banks, 1998:11). The empirical value of visual images is made possible when planners integrate photographs within a specific theoretical context. Theory frames visual research design by identifying important variables, allowing photographs to become the basis for “systematic knowledge” (Collier and Collier, 1990:170; Prosser and Schwarz, 1998:118). Mechanically, theory visually informs the photographer which variables are important to capture and which variables are not. For Jackson (1981:40), the relationship of theory, method, and the mechanics of shooting photographs are intricately related: “It is impossible to do serious (research) with a camera without some informing theory: there are too many chances for selection, options for inclusion and exclusion, too many choices made.”

For many image-based epistemologists, it is the “indexicality of the photograph” that makes visual images “the object of analytic and theoretical interest” (Larsen, 1999:11; also see Kracauer, 1993; Scruton, 1981; and Snyder and Allen, 1975). The indexical nature of a photograph is the causal relation of the subject in the photograph in spatial relation to other variables (Scruton, 1981:588; Kracauer, 1993:427).¹ Scott (1969:28) breaks down the variables of a photograph where each image can be understood as a sentence that tells a story.

Photography is a language — one in which we ordinarily dispense with words and use the images of person, places, and things instead. There are picture parallels to almost every sentence structure and part of speech. In the photographic language the shapes of the objects may be considered nouns. The relationships of the things depicted to each other and their placement in the picture may be thought of as the verbs. And the color and detail of the objects are the photographic adjectives that may convey much information not otherwise obtainable.

A non-empirical value of photographic research is that it places the researcher in the physical context of the research topic. Known as the “eye-witness principle” (Gombrich, 1980:246-248), it allows the planning investigator to say: “When I took this photograph” According to Prosser and Schwarz, “We can provide a degree of tangible detail, a sense of being there, and a way of knowing that may not readily translate into other symbolic modes of communication” (1998:116).

In summary, planning researchers who are looking to use visual-based research in their investigations need to keep in mind three characteristics of empirical images (see Table 1). First, empirical images must show a visually understandable photograph of the research subject so that further contemplation and analysis are possible. This differs from non-empirical images, which may purposefully distort the subject for explanatory purposes, showing objects and activities that do not directly relate to the research topic. Second, visual variables depicted in an empirical photograph must be informed by theory. Non-empirical images portray visual variables that are not informed by theory and may have very little to do with the topic of discussion. Finally, visual variables need to be “spatially indexed” to other significant visual variables in the image. Non-empirical images rarely show a relationship among visual variables, and, if they do, non-empirical images will lack the theoretical explanation for why the indexical relationship of variables is important.

Questions of Validity of Visual Images

What prevents the camera from being a neutral tool of generating reality is the attitudes, beliefs, and biases of its operator. “All images, despite their relationship to the world, are socially and technically constructed” (Harper, 1998:29; also see Becker, 1981:84; Scott, 1969:34.). Bias, introduced in visual research by the photographer, comes in one of two forms: (1) threats to internal validity and (2) threats to external validity. The question of validity in photographic research is slightly different than in non-image-based investigations and, therefore, needs additional clarification. Questions of lack of internal validity in a research project focus on issues where the researcher does not make the correct interpretation of the causal relationship between identified variables. In visual image research, lack of

TABLE 1. Empirical vs. non-empirical images.

Visual Aspects of Empirical Images	Empirical Image	Non-Empirical Image
Contemplation	An image of an object of research that shows the two-dimensional essence of the object. Chua's (1991) image of women using a public space in Singapore is one example.	Can be the same as empirical image but also includes images that purposefully do not include true representation of an object. Images that have artistic presentations, unusual vistas, and distorted juxtapositions of variables to emphasize a point are examples violating the principle of contemplation.
Identifiable Variables	Clearly defined, theoretically informed variables in the image. One example is Hayden's (2000) low-level aerial photographs to show local Guilford residents the relationship of different land uses in their community.	Visual variables may be identifiable in the image, but there is no theoretical explanation on why the variables are important.
Indexality of the Image	Theoretically informed visual variables accurately shown in spatial relation to other variables. For example, Whyte's (1988:70) image of the changing usable width of Lexington Avenue's sidewalk at Fifty-seventh Street with the "placement of signs, floral displays, vendors' tables, and, various impediments."	Non-theoretically informed visual variables showing little to no spatial relationship to other visual variables.

internal validity rests solely on the composition of the photograph and the "particular context at the point of taking the photo" (Adelman, 1998:152). Questioning a photograph's internal validity moves the frame of reference of image-based research away from a positivistic frame analysis of "pictures cannot lie," to more of a contextual assessment to determine validity through evaluating images within the overall research design of the project (Banks, 1998:15).

In particular, two areas in photo research are sensitive to questions of internal validity. First and epistemologically significant are internal validity questions concerning the potential exploitative nature of photographic investigations. Photographic research commonly has an inherently dualistic nature: it is "something that allows 'us' to understand more about 'them'" (Banks, 1998:10). Rony (1996:7) defines the "racially defined" nature of visual-based research as:

The category of "ethnographic film," at least in the popular imagination, is still by and large racially defined. The people depicted in an "ethnographic film" are meant to be seen as exotic, as people who until only too recently were categorized by science as Savage and Primitive, of an earlier evolutionary stage in the overall history of humankind: people without history, without writing, without civilization, without technology, without archives.

Epistemological questions of internal validity can be overcome by the photographer if they take the time to establish rapport (or at least establish mutual respect) between the researcher and the community they are investigating. Conducting photographic investigations within a larger field of research protocol allows the investigator to work on "gaining access" to the community they are researching. Similar to field research, photographic investigators need to be up-front with the community they are working with on who they are, as well as the nature of their research studies (Burgess, 1984:50).

The second question of internal validity, which is more technical in nature, is in the actual composition of the photograph that incorrectly shows a relationship between visual variables. This problem is extremely difficult for image-based researchers to overcome due to the nature of photographs. In particular, there are two mechanical variables that planning researchers need to be cognizant of when obtaining visual data. The first variable is what we call the two-dimensional/three-dimensional divide. The camera is an optical system that produces photographic images that are an abstraction of reality (Collier and Collier, 1990:1; Duff, 1981:75; Harper, 1998:29). “Whenever you photograph a typical scene, you record the angular relationship, or perspective, of a three-dimensional subject in two dimensions” (Kodak, 1968:9). It is the two-dimensional/three-dimensional divide inherent in all photographs that mitigates their indexicality value — the spatial relationship of visual variables. Most of these criticisms can be held in check with Snyder and Allen’s (1975) and Walton’s (1984) observations on how we actually see reality versus seeing a representation of reality through a photograph. Simply stated, an empirical photograph does not have the intent “to show us what we would have seen if we were there ourselves” (Snyder and Allen, 1975:151-152). It is the “failure to recognize and distinguish clearly between the special kind of seeing which actually occurs and the ordinary kind of seeing which only fictionally takes place, between a viewer’s *really* seeing something *through a photograph* and his *fictionally* seeing something *directly*” (Walton, 1984:254). By their very nature, photographs can only represent reality through resemblance (Scruton, 1981:590).

The second mechanical variable in the question of internal validity has to do with the contemplative value of an image. A photograph is a “minute time sample — a hundredth-of-a-second slice of reality” — that freezes “the particularity of a specific moment in time and space” (Collier and Collier, 1990:13; Prosser and Schwarz, 1998:119; Scott, 1969:54). This question of internal validity asks: Is the hundredth-of-a-second slice of reality worth contemplating and is it representative of reality, or is the photograph only a glimpse of a fleeting moment never to happen again? Here, the photographic researchers can protect themselves from this question of validity by cross-referencing their empirical images to other data sets and taking multiple pictures of the studied subject matter. For example, Jacob Riis took over 100 images to capture the nuances of the lower East Side in his book, *How the Other Half Lives* (1971). In general, technical internal validity problems can be heightened or lessened depending on how the photographer manipulates the camera in terms of lighting, focal point, focus, camera perspective, presentation of desired image, and the number of images taken of an event.

Questions of external validity focus on the generalizability of observations to a larger theoretical realm (Sanjek, 1990:335). In photographic research, questions of external validity focus on the representativeness of the images to the account given by the researcher. Does this image add meaning to the overall research project? Adelman (1998:153) gives a good illustration of how questions of external validity relate to photographic research:

The photo of a helicopter on a lawn with a person huddled under a jacket being assisted into the helicopter has only one additional clue and only for those who recognize the building as the White House. That photo document as a representation is unremarkable; when we are told that the person is President Nixon fleeing after Watergate we may be given meaning.

Threats to external validity can be overcome by: (1) clearly tying the photographic investigation in with the overall research protocol, (2) making sure photographic composition is informed by theory, and (3) clearly explaining the significance of the photograph in the text. This last point is one of the basic “ingredients” in photojournalism, as discussed by Hicks (1972:33):

Of the simpler ingredients of subject matter in the photojournalistic complex, the who, the where, and the when are questions answered by the photograph only in part, if at all. Often the photograph is not fully clear with respect to the what and raises doubt or conjecture as to the why or how. In supplying or completing these answers, the writer proves the need of his medium. He identifies people, locales, objects and establishes the relationships among them. He fixes the time of what is shown in the photograph. He confirms or corrects the reader’s analysis of emotion and explains other obscurities. He supplies evidences of the other senses: sound, smell, taste, feel.

Forsyth (1999) provides an interesting planning-related question of external validity regarding the use of photographic images in the debate over urban expansion in Sydney, Australia. In Forsyth's case study, images of three cities — Los Angeles, Toronto, and Canberra — were used by professionals and advocates to portray desirable and undesirable (“frightening”) futures for a proposed development to sway public sentiment regarding the project. Activists used the images of Los Angeles to show that “*Los Angeles-style planning and urban sprawl are things that are very bad;*” images of Toronto, as the “European” high density, pervasive public transit system model; and images of Canberra, a well-planned community 300 kilometers from Sydney, as a desired planned outcome (Forsyth, 1999:38). From an epistemological perspective, the application of illustrative images from different cities fails the question of external validity in that the visual variables illustrated in the three cities are not transitive (provide no explanatory power) to the variables in Sydney. It is fair for planners to use illustrative images for the purpose of metaphor and synecdoche in planning-related debates. It is not fair for planners to use illustrative images as empirical evidence to a causal relationship (for example, Los Angeles's low density development leads to urban sprawl and traffic congestion that will occur in Sydney) for the purpose of metaphor and synecdoche in the same debates. Planners' use of illustrative images as evidence of causality runs the risk of the images failing to answer questions of external validity. Forsyth (1999:46) correctly points out:

The main stream visual media and planning debates will continue to portray particular places in greater and less depth, and planners, designers, and activists will be able to use their visually familiar characteristics (or the lack of them) to help a wider public imagine a particular future. That these images are likely to oversimplify and misrepresent is a cause of concern.

INTEGRATING PHOTOGRAPHIC IMAGES WITHIN THE RESEARCH PROJECT

Genres of Photographic Research

Collier and Collier (1990:29-63, 77-97, 185-191) identify three broad genres of visual photographic investigations: (1) mapping and survey photographs, (2) cultural inventories and documenting social process, and (3) counting and measuring major activities. Let us go over these three aspects of photographic empirical research in more detail. The use of the camera for mapping and survey research is the most applicable use of visual images for contemporary planners. In mapping research, planning investigators take large-scale images of cultural, economic, social, and political geography in a particular environment as a frame of reference. Hayden's (2000:12-14) “Flying Over Guilford” research application of low-level aerial photographs (shot from altitudes of 1,000 to 2,000 feet) gave local residents a new way of understanding land uses that are valuable and visioning land uses that needed to be changed.

Photographic survey research is oriented toward the eye-level view of communities. Unlike mapping research, photographic surveying strives to capture more complex aspects of community. One example of this line of research is Wodz's (1994) use of the camera to document poor residential living conditions in Polish industrial towns. Another example is Reardon's use of photographic images in the East St. Louis Action Research Project to document the depressed situation in an East St. Louis community (Reardon, 1998:323-333, 2000:20-23). Images gathered through the East St. Louis Action Research Project showed how the physical environment (in particular, abandoned buildings) was a barrier in preventing this community from raising itself out of severe poverty.

Using the camera for cultural inventories and documenting social process is more of an introspective research project that requires an established rapport between the photographer and the community being researched. Cultural inventories are photographic investigations that capture images of how people use and organize their everyday space (work, home, recreation) as a way to analyze cultural values (Collier and Collier, 1990:45-47). A planning example is Chua's image-based research of an “Old Woman's Corner” showing how women in Singapore use the “void-deck” public space (1991:214). Documenting social processes are photographic records of social events that provide

insight into the dynamics of social interactions and relationships (Collier and Collier, 1990:91). Riis's photographs of New York's lower East Side are one example of recording urban slum conditions during the Depression (Riis, 1971). The value of the photographs in this line of research is directly dependent on the amount of time the researcher spends in the field. According to Becker (1981:11), "[S]ociety reveals itself to people who watch it attentively for a long time, not to the quick glance of a passerby."

Photographic research, for the purpose of counting and measuring, involves using the camera for historical and accounting purposes. The protocol for this type of research first involves identifying phenomena to be counted or measured and then shooting a series of photographs that allow for the quantitative information to be extracted (Collier and Collier, 1990:190). The historical aspect of this type of investigation is when statistical images are taken over time to document evolution. The best example of counting and measuring visual research is William Whyte's documentation in his book, *City* (1988), of how urban spaces are used. With the use of time-lapsed photography, Whyte was able to quantify such qualitative urban behavior as people liking to sit in the sunlight, especially on cooler days.

The Integration of Photographic Data within a Mixed-Method Research Design

Mixed-method research strategies (also known as triangulation) — the combination of quantitative with qualitative methods — are one way planners can integrate photographs with nonvisual data sets. There are two types of mixed-method strategies: (1) within-method triangulation — this is when an "investigator takes one method and employs multiple strategies within that method to examine data" (Denzin, 1989:243); and (2) between-method triangulation, which is the combination of dissimilar methods to examine like-phenomena (Gaber, 1993:143). Methodological triangulation is premised on a pragmatic operational assumption about research methods: "Some research methods are better suited for studying different types of problems than others" (Gaber and Gaber, 1997:98). As such, mixed-method research projects strive to maximize the overall research goal of getting the best assessment of a situation by using the best-suited research methods to get at the various aspects of the empirical world. For this paper, we focus on the integration of visual data within a between-method research protocol.²

There are five general purposes by which mixed-method research designs can be accomplished: convergence, development, complementarity, expansion, and initiation (Gaber and Gaber, 1997:99). We will now briefly review each of the five purposes for mixed-method research strategies and relate them to visual-based investigations. Convergence, sometimes referred to as triangulation, is the first and most common reason people execute mixed-method research. The goal of convergence is to use several competing methods to analyze a single phenomenon, with hopes that they will all come up with the same results, yielding greater confidence in the overall research findings. Mapping and survey photographic research are particularly strong for the purpose of convergence of data. The combination of visual images with geo-coded physical characteristics integrated with G.I.S. (Geographic Information System) research is an example of how visual data can be combined with qualitative data, as evidenced by Hayden's research in Guilford (2000). Development, the second purpose of mixed-method research, involves the sequential use of quantitative and qualitative methods, where results from the first method are used to inform the second method (Greene, *et al.*, 1989:260). From a development perspective, images can be used early on in the research project to provide direction on where a research project should focus its attention. Visual research of a public space can provide insights in the development of a survey of people who use the space.

The third purpose of mixed-method research is complementarity. This is when a researcher combines methods to measure overlapping, as well as different, aspects of a situation in order to enrich the understandings of that situation (Rossman and Wilson, 1985:639). In contrast to convergence, complementarity focuses on different aspects of the same phenomenon, while convergence research strategies look at the same aspects of the same phenomenon. A complementarity dimension for visual research is to provide added interpretations to existing data sets. One way of integrating images in a

complementarity research approach is the use of image-based research to provide new interpretations of physical data sets, such as geophysical maps (G.I.S. applications), for the purpose of complementarity (Collier and Collier, 1990:36).

For the fourth purpose of mixed-method research — expansion — the researcher “seeks to expand the breadth and range of inquiry by using different methods for different inquiry components” (Greene, *et al.*, 1989:259). Using the camera for quantitative purposes in the area of expansion helps planners capture the magnitude of a situation that is not attainable by traditional recording devices. In wildlife management, photographic images can be used to count species or track their traveling behavior in analyzing the bio-diversity of a particular location, for example, a wetland. Finally, in contrast to convergence, initiation mixed-method research looks for situations where research findings do not converge. The goal of initiation is to discover new interpretations and suggest areas for further exploration or develop new ways of thinking about a problem (Gaber and Gaber, 1997:99). The initiative use of images in a mapping and survey research strategy can provide new insight that takes a research project in a whole new direction. William Whyte’s (1988) research of urban spaces is one example of how mapping photographic images was used to generate new understandings of how open spaces are used. One of Whyte’s more interesting cases was how people like to move mobile chairs when they sit in public places.

IMAGE-BASED RESEARCH OF THE 14TH STREET VENDORS’ MARKET

New York City street vending is one of the hallmarks of the city that makes it a unique global city. To get a better understanding of New York City street vending, a nine-month field research investigation of street vendors peddling on Manhattan’s 14th Street was conducted in the early 1990s. The project was organized according to a mixed-method research project, which included the following data-gathering techniques: non-participation field research, photographic research, census analysis, interviews, and secondary data analysis that included a review of *New York Times* articles and city documents. Of particular interest for this paper is the use of photographic images in the research project.

Photographic Methodology

The photographic aspect of the 14th Street research was closely integrated with the other research activities. A total of 219 photographs and 83 color slides were taken during the nine months of field research. In terms of Collins and Collins’ genres of photographic research strategies, the research on 14th Street was a combination of photographic survey research with images of street-wide peddling activity (e.g., several vendors peddling next to each other) and documenting social processes with close-up, detailed photographs of individual street vendors in relation to their peddled products.

The images taken on 14th Street had different mixed-method relationships to different data sets in the overall research project. For example, the visual images had a development relationship to the field research in that the field observations informed the photographer as to what street vendor images needed to be taken. The photographic images were also used for convergence with field research data as confirming a series of observations. One example of confirmation is documenting street vending on 14th Street. It is generally illegal to peddle on 14th Street.³ Images of street vending retailing on 14th Street confirmed the existence of vendors on the street. Finally, the photographic images were used for the purpose of expanding the field observation data. Here, the contemplative power of visual images allowed the researcher to critically observe street vending activity, which was not possible in the field. Photographs allowed the researcher to observe a particular vendor engaged in trade for hours, while, in the field, the vendor can only be viewed for a brief moment; if longer, the moment would become awkward, and the researcher would have to divert his/her attention away from the vendor.

The vast majority of the images taken on 14th Street were theoretically guided by the research on the informal economy. One way to define the informal economy is as income-generating activities that

FIGURE 1.

lack adherence to established institutional regulations (Castells and Portes, 1989:12; Portes and Sassen-Koob, 1987:31; Mattera, 1985:1). The theoretical focus of the research on 14th Street was the intersection of the informal economy with the formal economy and how street vending on 14th Street was one case of street entrepreneurs retailing their legal goods illegally to earn a living (Gaber, 1994). Since it is illegal to peddle on 14th Street, almost all street vending of legal goods taking place there is part of the informal economy.⁴ The photographic research documented several areas where informal street vending on 14th Street maintained a complex complementary relationship to the formal economy.

Photographic Research of the 14th Street Vendors' Market

The majority of the vendors that peddle on 14th Street retail their goods in a two-block area between 7th Avenue and Broadway in what has been called a "vendors' market." Vendors' markets are locations throughout New York City where several street vendors retail their merchandise on the same street or avenue, producing a unique, open-air bazaar (Gaber, 1994). The 14th Street vendors' market can get extremely congested with peddlers hawking their wares and pedestrians examining all the goods that are for sale. As can be seen in Figure 1, the lines that separate the stores from the sidewalk and the sidewalk from the street are filled with vendors. The encroachment of vendors onto the sidewalk force the pedestrians to stop, look, touch, feel, eat, drink, and talk about what is being sold. The evidence presented in Figure 1 shows how the vendors have transformed the transportation function of the sidewalk into a festive social outdoor marketplace. It is the unique shopping experience in the 14th Street vendors' market produced by the peddlers that makes this an attractive shopping district

FIGURE 2.

for both tourists and New Yorkers alike. The positive retail climate created by the vendors is seen as an asset by local store owners. According to one 14th Street store manager: “[T]he vendors are a major trademark for 14th Street ... they are good (for business) because they attract people to the storefront” (Gaber, 1994:391).

What makes the 14th Street vendors’ marketplace unique in its composition, as compared to other vendor markets in the city, is its international flavor. Unlike more traditional, mono-ethnic marketplaces, like Canal Street in Chinatown, the vendors who peddle in the 14th Street vendors’ market come from a wide array of countries, including Ecuador, Egypt, India, Israel, Kuwait, Korea, Mexico, Pakistan, Senegal, and Vietnam. Figure 2 shows three vendors peddling next to each other; each vendor is from a different country. The gentleman in the hat selling individual leather handbags on the blanket is from Senegal. The woman selling costume jewelry on the folding table is from Mexico. The child holding the flag is helping his father, both of whom are from Costa Rica, sell roasted nuts.

FIGURE 3.

Along with the wide variety of countries represented by the various street vendors who peddle on 14th Street are the diverse array of goods sold by the peddlers. Contemporary images of New York City street vending usually include the commonplace hotdog/pretzel vendor and the fruit cart vendor. Although these mobile food vendors do peddle on 14th Street, they are not as common as the mobile, general merchandise vendors and the “stoopline” vendors. Mobile, general merchandise vendors are those peddlers who retail their non-food goods on moveable vehicles or displays (Gaber, 1994:382). These vendors sell goods ranging from batteries, watches, and flashlights, to socks, T-shirts, sweaters, and summer dresses. Almost all of the 14th Street general merchandise vendors are not licensed to peddle (i.e., are illegal) but obtain their goods legally through local wholesalers. Some general merchandise mobile vendors are more enchanting than others. For example, the vendor shown in Figure 3 sells Christian religious objects (crosses, rosaries, statues of Mary and Jesus, etc.). Some of the items he sells are hand-painted by himself, other products are purchased from local wholesalers in his community in Connecticut. Street vendors are one-way manufacturers, wholesalers, and crafts people who get their products out to the public. Twice a week, the pictured man takes the train into New York City from his home in Connecticut to peddle on 14th Street. His detailed display of an amazing assortment of religious items makes him one of the more popular vendors in the 14th Street vendors’ market. Notice how the vendor uses the building as a backdrop and his fold-up table as a display case, making the presentation of his goods similar to that seen in the counter section of a major department store.

Stoopline vendors are extremely popular on 14th Street but are seldom understood by the passing public as street vendors. Within the two-block area that constitutes the 14th Street vendors’ market, there are, on average, 20 stoopline stands. Stoopline peddlers are general merchandise vendors who

FIGURE 4.

retail goods within the stoopline of buildings with the consent of the owners of the premises (City of New York, 1936). One aspect of stoopline stands that differentiates them from all of the other peddlers on 14th Street is that they pay rent to their host store owner. Rent can be quite high for premium stoopline space. In 1990 and 1991, the going rate to rent a 3 x 6 ft. stoopline space on 14th Street was \$4,000 a month (Gaber, 1994:389).

FIGURE 5.

The image in Figure 4 tells a lot about stoopline vending on 14th Street. First, the products sold by the stoopline vendors are clearly different from what is sold by the host store. The stoopline vendor pictured is selling perfumes, batteries, and audio and video cassettes. The store, "Bargain Queen," is retailing mostly women's clothing. Second, the pictured stoopline vendor, like most stoopline vendors on 14th Street, sells finished, sealed goods — for example, batteries — while most non-stoopline general merchandise vendors sell unsealed products; for example, the Senegalese vendor in Figure 2 sells unwrapped, individual handbags.⁵ Stoopline vendors are linked to the formal economy by the goods they sell. The vast majority of the goods sold by stoopline vendors are products produced by known multinational companies, such as Duracell batteries, Kodak film, and JVC video cassettes. Many of the wholesalers who supply the 14th Street stoopline vendors with the goods they sell on the street value the vendors so much that they actually deliver the ordered products that are to be sold on 14th Street. Finally, stoopline vendors like to think of themselves more as small stores rather than

actual street vendors. The stoopline vendor who owns the stand pictured in Figure 4 is very proud of his enterprise and purposefully dresses like a businessman (sport coat, oxford shirt, and wool slacks) to earn the trust and respect of his customers.

What the camera was particularly adept at capturing in the 14th Street vendors' market was the human element of street peddling. The people who came to 14th Street to peddle came from a world of precipitating factors, but the vendors' goals are all the same: to make a living. The image in Figure 5 is of Ecuadorian women selling summer dresses. They are busy stuffing their dresses into a travel bag because they just saw a policeman walking their way, and they do not want to get ticketed for illegal peddling. The simple drama of getting a ticket for illegal peddling is heightened for the women because their travel visas are expired, and they could be deported if the police officer checks on their citizenship standing. Fortunately for the women, the police officer did not issue them a ticket for illegal peddling or check their citizenship.

Taken together, the images and other data sets collected for the mixed-method research design show a multi-ethnic, low-income-oriented retail corridor. Significantly, this contrasts sharply with quantitative census tract data that may be used to describe the area. Census data point out that the 14th Street area is an upper-middle income residential community. Planners need to be aware of the divergent realities of this community in order to make inclusive plans.

CONCLUSION

The goal of this paper is to show planning investigators how they can move beyond using photographic images as illustrations and integrate them as data to provide more explanatory power to their research. Several key factors for moving photographs into the realm of data are identified: contemplation, variable theory and context, spatial relationship, subject rapport, and a multiplicity of photographs. Using the camera as an empirical generating tool forces planners to think seriously about the composition of the images they are taking. However, the empirical value of visual-based research does not stop at the well-organized photograph but, instead, needs to be integrated with other data sets in the research project so as to expand the depth and confidence of their final conclusions. In the final analysis, a picture framed in the proper methodological and theoretical context should be able to tell more than a thousand words.

NOTES

1. Photographic researchers have been debating the "indexality" issue (also known as "the realism debate") for as long as photographs have been considered for empirical evidence. Most image-based researchers are in agreement that the "philosophizing about photographs and reality" are all but over (Snyder and Allen, 1975:170). However, some still hold that photographs cannot be indexed. For example, John Tagg (1988:3) argues that "the indexical nature of the photograph... is highly complex, irreversible, and can guarantee nothing at the level of meaning." Some of the criticism in the lack of indexality of photographs can be partially overcome by placing photographic research within a mixed-method research context where it can be cross-referenced to other data sets (e.g., field research, census data, survey research, etc.) for substantiation (Gaber and Gaber, 1997).
2. This does not preclude the possibility that visual images can be used as a within-method triangulation strategy. An example of this is the use of photographs for both quantitative analysis (counting) and qualitative interpretations.
3. There are two categories of city regulations that force vendors to peddle illegally on 14th Street. First, there are licensing restrictions. It is illegal to peddle in New York City without a street vendor license. It is extremely difficult, in fact, almost impossible to obtain a street vendor license in New York City (Gaber, 1994:381). Second, since 1916, it is illegal to peddle on 14th Street Monday through Saturday (City of New York, 1916). Regardless of if a vendor has a license to peddle, he/she can be ticketed or arrested six out of the seven days of the week for illegal peddling on 14th Street.
4. Military veterans, who have exclusive right to peddle anywhere in New York City and qualify to get a special military veterans vendor license, are the only exception to this rule.
5. The comparison of the image in Figure 4 to the image in Figure 2 is one example of how different empirical images can be cross-referenced to each other to develop a new understanding of a particular situation.

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